

Notice of Allowability

Application No.

10/696,888

Examiner

BERNARD KRASNIC

Applicant(s)

TRETTER ET AL.

Art Unit

2624

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/09/2012.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-42 now renumbered as 1-42.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 11/09/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20120328
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

/Bernard Krasnic/
Primary Examiner, Art Unit 2624

DETAILED ACTION

1. This Office Action incorporates an Examiner's Amendment and Reasons For Allowance.
2. The application has pending claim(s) 1-42.
3. The Board of Patent Appeals and Interferences, on 1/09/2012, reversed the Examiner's 35 U.S.C. 103(a) rejections of claims 1-42 respectively {see the BPAI Decision filed 1/09/2012 on pages 1-5}. Therefore, the 35 U.S.C. 103(a) rejections of claims 1-42 respectively have been withdrawn.
4. The terminal disclaimer filed on 3/28/2012 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Pat. No. US 7,301,549 B2 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Examiner's Comments

5. The method of claim 1 is understood by the Examiner to be inherently tied to a particular machine because the significant method step(s) of "generating ..." and "alternating ..." would require a computer processor. Further based upon consideration of *all the relevant factors* with respect to the claim as a whole, there is no clear indication that the method is directed to an abstract idea and there is no clear indication

that the method is just a mere statement of a concept. Therefore the claim is patent-eligible under 35 U.S.C. 101.

6. The method of claim 31 is understood by the Examiner to be inherently tied to a particular machine because the significant method step(s) of "generating ..." and "displaying ..." would require a computer processor. Further based upon consideration of *all the relevant factors* with respect to the claim as a whole, there is no clear indication that the method is directed to an abstract idea and there is no clear indication that the method is just a mere statement of a concept. Therefore the claim is patent-eligible under 35 U.S.C. 101.

EXAMINER'S AMENDMENT

7. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Denise Lee (Reg. No. 35,931) on March 28, 2012.

The application has been amended as follows:

For claims 27-30 on pages 7-8 of the Applicant's Amendment After Non-Final dated 1/26/2007:

1. Please further amend **each of claims 27-30** by replacing -- computer-readable medium -- in line 1 with "computer-readable non-transitory medium".

REASONS FOR ALLOWANCE

8. The following is an examiner's statement of reasons for allowance:

Claims 1-42 (now renumbered as claims 1-42, for issue) are allowed.

Independent claim 1 (now renumbered as claim 1, for issue) respectively recites the limitations of: receiving image data for the image on a first type of grid; generating a first sub-frame and a second sub-frame corresponding to the image data, the first and the second sub-frames each generated on a second type of grid that is different than the first type of grid, wherein one of the first type of grid and the second type of grid is a non-rectangular grid; and alternating between displaying the first sub-frame in a first position and displaying the second sub-frame in a second position spatially offset from the first position.

Independent claim 10 (now renumbered as claim 10, for issue) respectively recites the limitations of: a buffer adapted to receive image data for the image on a first type of grid; an image processing unit configured to define first and second sub-frames corresponding to the image data, the first and the second sub-frames each defined on a second type of grid that is different than the first type of grid, wherein one of the first type of grid and the second type of grid is a non-rectangular grid; and a display device adapted to alternately display the first sub-frame in a first position and the second sub-frame in a second position spatially offset from the first position.

Independent claim 19 (now renumbered as claim 19, for issue) respectively recites the limitations of: means for receiving a first high resolution image on a first type

of grid; means for storing a relationship between low resolution sub-frame values and high resolution image values, the relationship based on minimization of an error metric between the high resolution image values and a simulated high resolution image that is a function of the low resolution sub-frame values; and means for generating a first plurality of low resolution sub-frames for display at spatially offset positions to generate the appearance of a high resolution image based on the first high resolution image and the stored relationship, each of the low resolution sub-frames generated on a second type of grid, wherein one of the first type of grid and the second type of grid is a non-rectangular grid.

Independent claim 27 (now renumbered as claim 27, for issue) respectively recites the limitations of: generating low resolution sub-frames for display at spatially offset positions to generate the appearance of a high resolution image, comprising: receiving a first high resolution image on a first type of grid; providing a relationship between sub-frame values and high resolution image values, the relationship based on minimization of a difference between the high resolution image values and a simulated high resolution image that is a function of the sub-frame values; and generating a first plurality of low resolution sub-frames for display at spatially offset positions to generate the appearance of a high resolution image based on the first high resolution image and the relationship between sub-frame values and high resolution image values, the first plurality of low resolution sub-frames generated on a second type of grid, wherein one of the first type of grid and the second type of grid is a non-rectangular grid.

Independent claim 31 (now renumbered as claim 31, for issue) respectively recites the limitations of: receiving image data for the image on a first type of grid; generating a first frame corresponding to the image data based on minimization of an error between the image data and a simulated image, the first frame generated on a second type of grid that is different than the first type of grid; and displaying the first frame on the second type of grid, wherein one of the first type of grid and the second type of grid is a non-rectangular grid.

Independent claim 37 (now renumbered as claim 37, for issue) respectively recites the limitations of: a buffer adapted to receive image data for the image on a first type of grid; an image processing unit configured to define a first frame corresponding to the image data based on minimization of an error between the image data and a simulated image, the first frame defined on a second type of grid that is different than the first type of grid, wherein one of the first type of grid and the second type of grid is a non-rectangular grid; and a display device adapted to display the first frame on the second type of grid.

The combination of these features as cited in the claims in combination with the other limitations of the claims are neither disclosed nor suggested by the prior art of record.

The closest reference Gibbon et al (US 2003/0020809 A1, as applied in previous Office Action) discloses superimposition of images. However, Gibbon does not teach the limitations cited above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Bernard Krasnic/
Primary Examiner, Art Unit 2624
March 30, 2012